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| Project Overview page 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name of Project:** | | | A New Generat…..ion NN | | | | | | | | | | | | | | | | **Duration:** | | | 8 weeks | | | | | | | |
| **Subject/Course:** | | | **PWC** | | | | | | | **Teacher(s): Freshmen Academy** | | | | | | | | | **Grade Level:** | | | 9th Grade | | | | | | | |
| **Other Subject Areas to Be Included:** | | | English I, W. Geography, Alg I, Freshmen Seminar | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Project Idea**  Summary of the issue, challenge, investigation, scenario, or problem: | | | Design a generator using a renewable energy source. Pick a recent disaster; and design and make a generator specifically for that area  Design a training manual that includes: research on disaster, how to build and operate the generator, and survival tips | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Essential Question** | | | How would you create the energy you need to survive after a natural disaster? | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Content Standards** to be taught and assessed**:** | | | **Math-** Geometry and Measurement, Mathematical Processes, Data Analysis, Statistics and Probability, Proportions, Ratios  **ELA-** Language, Communication, Writing, Research, Logic, Informational Text, Media and Literature  **Science-** Embedded Inquiry, Technology & Engineering, The thermodynamics and the conservation of energy, Waves and Optics, Electricity and magnetism.  **Social Studies-** Culture, Economics, Geography, Governance & Civics, History and Individuals, Groups & Interactions | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | **T** | **A** | **E** |  | | | | | | | | | **T** | | | **A** | | | **E** |
| **Professional (21st Century) Skills** to be taught, assessed and/or encouraged**:** | | | Collaboration | | | | | | | |  |  |  | Other: | | | | | | | | |  | | |  | | |  |
| Communication (Oral Presentation) | | | | | | | |  |  |  |  | | | | | | | | |  | | |  | | |  |
| Critical Thinking/Problem Solving | | | | | | | |  |  |  |  | | | | | | | | |  | | |  | | |  |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Major Products & Performances** | Group: | | | Pick a recent disaster; and design and make a generator specifically for that area  Design a training manual that includes: research on disaster, how to build and operate the generator, and survival tips | | | | | | | | | | | | | | | | **Presentation Audience**   **Presentation Audience:**      Class   School | | | | | | | | | |
|  | Class | | | | | | | | |
|  | School x | | | | | | | | |
|  | Community x | | | | | | | | |
| Individual: | | | Research disasters, Compare and Contrast paper on two disasters from two different places, service project/food drive, lab journal | | | | | | | | | | | | | | | |  | Experts | | | | | | | | |
|  | Web | | | | | | | | |
|  | Other: Partners | | | | | | | | |
| Project Overview page 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Entry Event** to  launch inquiry,  engage students: | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessments** | | **Formative Assessments**  (During Project) | | | | I | | Quizzes/Tests | | | | | | | | G | | Practice Presentations | | | | | |  | | |
| I | | Journal/Learning Log | | | | | | | | G | | Notes | | | | | |  | | |
| G | | Preliminary Plans/Outlines/Prototypes | | | | | | | | G | | Checklists | | | | | |  | | |
| G & I | | Rough Drafts | | | | | | | | G | | Concept Maps | | | | | |  | | |
| I | | Online Tests/Exams | | | | | | | |  | | Other: | | | | | |  | | |
| **Summative Assessments**  (End of Project) | | | | G | | Written Product(s), with rubric: Training Manual  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | I | | Other Product(s) or Performance(s), with  rubric: Compare & Contrast Paper | | | | | |  |
| G | | Oral Presentation, with rubric | | | | | | | | I | | Peer Evaluation | | | | | |  | | |
|  | | Multiple Choice/Short Answer Test | | | | | | | | I | | Self-Evaluation | | | | | |  | | |
|  | | Essay Test | | | | | | | | G | | Other: Build Generator | | | | | |  | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Resources Needed** | | **On-site people, facilities:** | | | | | | | Academy Coach, Vaughn, auditorium, parking lot, school gym, Mr. V., Mr. Q's Dad | | | | | | | | | | | | | | | | | | | | |
| **Equipment:** | | | | | | | laptops available for at least 3 weeks, tools and various supplies for generators | | | | | | | | | | | | | | | | | | | | |
| **Materials:** | | | | | | | Google Maps, Checklists, wires, clips, Styrofoam, Rubrics, etc | | | | | | | | | | | | | | | | | | | | |
| **Community resources:** | | | | | | | Donna Gilley for basic information and beginning activity, Nashville Black Chamber of Commerce, FEMA, and other school partners, Martha OBryan Food Bank | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Reflection Methods** | | **(Individual, Group, and/or Whole Class)** | | | x | | Freshman Academy Notebook | | | | | | | |  | | Focus Group | | | | | |  | | | | |  | |
| x | | Whole-Class Discussion | | | | | | | | x | | Fishbowl Discussion | | | | | |  | | | | |  | |
|  | | Survey | | | | | | | | X | | Other: individual assessment | | | | | |  | | | | |  | |